

RESULT 15

PCT-US01-22395A-219

; Sequence 219, Application PC/TUS0122395A

; GENERAL INFORMATION:

; APPLICANT: Bullard, James M.

; APPLICANT: Janjic, Nebojsa

; APPLICANT: McHenry, Charles S.

; APPLICANT: Replidyne, Inc.

; TITLE OF INVENTION: NOVEL DNA POLYMERASE III HOLOENZYME DELTA SUBUNIT

; TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND PROTEINS

; FILE REFERENCE: RDYN03PCT

; CURRENT APPLICATION NUMBER: PCT/US01/22395A

; CURRENT FILING DATE: 2001-07-16

; PRIOR APPLICATION NUMBER: 60/218,246

; PRIOR FILING DATE: 2000-07-14

; NUMBER OF SEQ ID NOS: 230

; SOFTWARE: PatentIn Ver. 2.0

; SEQ ID NO 219

; LENGTH: 312

; TYPE: PRT

; ORGANISM: Thermotoga maritima

PCT-US01-22395A-219

Query Match 99.3%; Score 1562.5; DB 1; Length 312;

Best Local Similarity 99.7%; Pred. No. 4.8e-124;

Matches 311; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

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Qy      1 MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPPKASDVL 60
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Db      1 MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPPKASDVL 60

Qy     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFLKALEEPPEYA 120
        |||
Db     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFLKALEEPPEYA 120

Qy    121 VIVLNTRRWHYLLPTIKSRVFRVVVNPKEFRDLVKEKIGDLWEELPLLERDFKTALEAY 180
        |||
Db    121 VIVLNTRRWHYLLPTIKSRVFRVVVNPKEFRDLVKEKIGDLWEELPLLERDFKTALEAY 180

Qy    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240
        |||
Db    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240

Qy    241 NTITGKDAFLLIQRLTRIILHENTWESVED-KSVSFLDSILRVKIANLNNKLTLMNILAI 299
        |||
Db    241 NTITGKDAFLLIQRLTRIILHENTWESVEDQKSVSFLDSILRVKIANLNNKLTLMNILAI 300

Qy    300 HRERKRGVNAWS 311
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Db    301 HRERKRGVNAWS 312

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RESULT 15

US-09-906-179A-219

; Sequence 219, Application US/09906179A

; Publication No. US20030219737A1

; GENERAL INFORMATION:

; APPLICANT: Bullard, James M.

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; APPLICANT: Janjic, Nebojsa
; APPLICANT: McHenry, Charles S.
; TITLE OF INVENTION: NOVEL DNA POLYMERASE III HOLOENZYME DELTA SUBUNIT
; TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND PROTEINS
; FILE REFERENCE: RDYN03
; CURRENT APPLICATION NUMBER: US/09/906,179A
; CURRENT FILING DATE: 2001-07-16
; PRIOR APPLICATION NUMBER: 60/218,246
; PRIOR FILING DATE: 2000-07-14
; PRIOR APPLICATION NUMBER: 09/818,780
; PRIOR FILING DATE: 2001-03-28
; PRIOR APPLICATION NUMBER: 60/192,736
; PRIOR FILING DATE: 2000-03-28
; NUMBER OF SEQ ID NOS: 230
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 219
; LENGTH: 312
; TYPE: PRT
; ORGANISM: Thermotoga maritima
US-09-906-179A-219
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Query Match          99.3%;  Score 1562.5;  DB 3;  Length 312;
Best Local Similarity 99.7%;  Pred. No. 5.2e-122;
Matches 311;  Conservative 0;  Mismatches 0;  Indels 1;  Gaps 1;
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Qy      1 MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPPKASDVL 60
          |||
Db      1 MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPPKASDVL 60

Qy     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFLKALEEPPEYA 120
          |||
Db     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFLKALEEPPEYA 120

Qy    121 VIVLNTRRWHYLLPTIKSRVFRVVVNVVPKEFRDLVKEKIGDLWEELPLLERDFKTALEAY 180
          |||
Db    121 VIVLNTRRWHYLLPTIKSRVFRVVVNVVPKEFRDLVKEKIGDLWEELPLLERDFKTALEAY 180

Qy    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240
          |||
Db    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240

Qy    241 NTITGKDAFLLIQRLTRIILHENTWESVED-KSVSFLDSILRVKIANLNNKLTLMNILAI 299
          |||
Db    241 NTITGKDAFLLIQRLTRIILHENTWESVEDQKSVSFLDSILRVKIANLNNKLTLMNILAI 300

Qy    300 HRERKRGVNAWS 311
          |||
Db    301 HRERKRGVNAWS 312
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RESULT 1
A72337

DNA polymerase III, gamma subunit-related protein - *Thermotoga maritima* (strain MSB8)

C;Species: *Thermotoga maritima*

C;Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004

C;Accession: A72337

R;Nelson, K.E.; Clayton, R.A.; Gill, S.R.; Gwinn, M.L.; Dodson, R.J.; Haft, D.H.; Hickey, E.K.; Peterson, J.D.; Nelson, W.C.; Ketchum, K.A.; McDonald, L.; Utterback, T.R.; Malek,

J.A.; Linher, K.D.; Garrett, M.M.; Stewart, A.M.; Cotton, M.D.; Pratt, M.S.; Phillips, C.A.; Richardson, D.; Heidelberg, J.; Sutton, G.G.; Fleischmann, R.D.; White, O.; Salzberg, S.L.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Nature 399, 323-329, 1999

A;Title: Evidence for lateral gene transfer between Archaea and Bacteria from genome sequence of *Thermotoga maritima*.

A;Reference number: A72200; MUID:99287316; PMID:10360571

A;Accession: A72337

A;Status: preliminary

A;Molecule type: DNA

A;Residues: 1-312

A;Cross-references: UNIPROT:Q9WZM9; UNIPARC:UPI000000D3995; GB:AE001746; GB:AE000512; NID:g4981285; PIDN:AAD35853.1; PID:g4981299; TIGR:TM0771

A;Experimental source: strain MSB8

C;Genetics:

A;Gene: TM0771

Query Match 99.3%; Score 1562.5; DB 2; Length 312;
Best Local Similarity 99.7%; Pred. No. 3.8e-90;
Matches 311; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

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Qy      1 MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPPKASDVL 60
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Db      1 MNDLIRKYAKDQLETLKRIIEKSEGISILINGEDLSYPREVSLELPEYVEKFPPKASDVL 60

Qy     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFLKALEEPPEYA 120
          ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     61 EIDPEGENIGIDDIRTIKDFLNYSPELYTRKYVIVHDCERMTQQAANAFLKALEEPPEYA 120

Qy    121 VIVLNTRRWHYLLPTIKSRVFRVVVNPKEFRDLVKEKIGDLWEELPLLERDFKTALEAY 180
          ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    121 VIVLNTRRWHYLLPTIKSRVFRVVVNPKEFRDLVKEKIGDLWEELPLLERDFKTALEAY 180

Qy    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240
          ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db    181 KLGAEKLSGLMESLKVLETEKLLKKVLSKGLEGYLACRELLERFSKVESKEFFALFDQVT 240

Qy    241 NTITGKDAFLLIQRLTRIILHENTWESVED-KSVSFLDSILRVKIANLNNKLTLMNILAI 299
          |||||||||||||||||||||||||||| ||||||||||||||||||||||||
Db    241 NTITGKDAFLLIQRLTRIILHENTWESVEDQKSVSFLDSILRVKIANLNNKLTLMNILAI 300

Qy    300 HRERKRGVNAWS 311
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Db    301 HRERKRGVNAWS 312
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RESULT 15

US-09-906-179A-220

; Sequence 220, Application US/09906179A

; Publication No. US20030219737A1

; GENERAL INFORMATION:

; APPLICANT: Bullard, James M.

; APPLICANT: Janjic, Nebojsa

; APPLICANT: McHenry, Charles S.

; TITLE OF INVENTION: NOVEL DNA POLYMERASE III HOLOENZYME DELTA SUBUNIT

; TITLE OF INVENTION: NUCLEIC ACID MOLECULES AND PROTEINS

; FILE REFERENCE: RDYN03

; CURRENT APPLICATION NUMBER: US/09/906,179A
; CURRENT FILING DATE: 2001-07-16
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; PRIOR APPLICATION NUMBER: 09/818,780
; PRIOR FILING DATE: 2001-03-28
; PRIOR APPLICATION NUMBER: 60/192,736
; PRIOR FILING DATE: 2000-03-28
; NUMBER OF SEQ ID NOS: 230
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 220
; LENGTH: 1980
; TYPE: DNA
; ORGANISM: Thermotoga maritima
US-09-906-179A-220

Query Match 100.0%; Score 936; DB 3; Length 1980;
Best Local Similarity 100.0%; Pred. No. 6.4e-283;
Matches 936; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	ATGAACGATTTGATCAGAAAGTACGCTAAAGATCAACTGGAACTTTGAAAAGGATCATA	60
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Qy	61	GAAAAGTCTGAAGGAATATCCATCCTCATAAATGGAGAAGATCTCTCGTATCCGAGAGAA	120
Db	348	GAAAAGTCTGAAGGAATATCCATCCTCATAAATGGAGAAGATCTCTCGTATCCGAGAGAA	407
Qy	121	GTATCCCTTGAAC TTCCCGAGTACGTGGAGAAATTTCCCCGAAGGCCTCGGATGTTCTG	180
Db	408	GTATCCCTTGAAC TTCCCGAGTACGTGGAGAAATTTCCCCGAAGGCCTCGGATGTTCTG	467
Qy	181	GAGATAGATCCCGAGGGGGGAGAACATAGGCATAGACGACATCAGAACGATAAAGGACTTC	240
Db	468	GAGATAGATCCCGAGGGGGGAGAACATAGGCATAGACGACATCAGAACGATAAAGGACTTC	527
Qy	241	CTGAAC TACAGCCCCGAGCTCTACACGAGAAAGTACGTGATAGTCCACGACTGTGAAAGA	300
Db	528	CTGAAC TACAGCCCCGAGCTCTACACGAGAAAGTACGTGATAGTCCACGACTGTGAAAGA	587
Qy	301	ATGACCCAGCAGGCGGCGAACGCGTTTCTGAAGGCCCTTGAAGAACCACCAGAATACGCT	360
Db	588	ATGACCCAGCAGGCGGCGAACGCGTTTCTGAAGGCCCTTGAAGAACCACCAGAATACGCT	647
Qy	361	GTGATCGTTCTGAACACTCGCCGCTGGCATTATCTACTGCCGACGATAAAGAGCCGAGTG	420
Db	648	GTGATCGTTCTGAACACTCGCCGCTGGCATTATCTACTGCCGACGATAAAGAGCCGAGTG	707
Qy	421	TTCAGAGTGGTTGTGAACGTTCCAAAGGAGTTCAGAGATCTCGTGAAAGAGAAAATAGGA	480
Db	708	TTCAGAGTGGTTGTGAACGTTCCAAAGGAGTTCAGAGATCTCGTGAAAGAGAAAATAGGA	767
Qy	481	GATCTCTGGGAGGAACTTCCACTTCTTGAGAGAGACTTCAAAACGGCTCTCGAAGCCTAC	540
Db	768	GATCTCTGGGAGGAACTTCCACTTCTTGAGAGAGACTTCAAAACGGCTCTCGAAGCCTAC	827
Qy	541	AAACTTGGTGCGGAAAACTTTCTGGATTGATGGAAAGTCTCAAAGTTTTGGAGACGGAA	600

Db	828	AAACTTGGTGCGGAAAACTTTCTGGATTGATGGAAAGTCTCAAAGTTTTGGAGACGGAA	887
Qy	601	AAACTCTTGAAAAAGGTCCTTTCAAAGGCCTCGAAGGTTATCTCGCATGTAGGGAGCTC	660
Db	888	AAACTCTTGAAAAAGGTCCTTTCAAAGGCCTCGAAGGTTATCTCGCATGTAGGGAGCTC	947
Qy	661	CTGGAGAGATTTTCAAAGGTGGAATCGAAGGAATTCTTTGCGCTTTTGTATCAGGTGACT	720
Db	948	CTGGAGAGATTTTCAAAGGTGGAATCGAAGGAATTCTTTGCGCTTTTGTATCAGGTGACT	1007
Qy	721	AACACGATAACAGGAAAAGACGCGTTTCTTTTGATCCAGAGACTGACAAGAATCATTCTC	780
Db	1008	AACACGATAACAGGAAAAGACGCGTTTCTTTTGATCCAGAGACTGACAAGAATCATTCTC	1067
Qy	781	CACGAAAACACATGGGAAAGCGTTGAAGATCAAAAAAGCGTGTCTTTCCTCGATTCAATT	840
Db	1068	CACGAAAACACATGGGAAAGCGTTGAAGATCAAAAAAGCGTGTCTTTCCTCGATTCAATT	1127
Qy	841	CTCAGGGTGAAGATAGCGAATCTGAACAACAACTCACTCTGATGAACATCCTCGCGATA	900
Db	1128	CTCAGGGTGAAGATAGCGAATCTGAACAACAACTCACTCTGATGAACATCCTCGCGATA	1187
Qy	901	CACAGAGAGAGAAAGAGAGGTGTCAACGCTTGGAGC	936
Db	1188	CACAGAGAGAGAAAGAGAGGTGTCAACGCTTGGAGC	1223